TRANSLATION

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference	FOR FURTHER ACTION	See Form PCT/IPEA/416
0000054918		
International application No.	International filing date *(day/month/year)*	Priority date *(day/month/year)*
PCT/EP2004/010491	18.09.2004	26.09.2003

International Patent Classification (IPC) or national classification and IPC

C08L23/22, C08F290/04, C14C11/00, C14C9/00, D06M15/227, D06M15/27, D21H19/20, C04B41/48, B27K3/15

Applicant

BASF AKTIENGESELLSCHAFT

1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 6 sheets, including this cover sheet.

3. This report is also accompanied by ANNEXES, comprising:

   a. ☒ *(sent to the applicant and to the International Bureau)* a total of 9 sheets, as follows:

      ☒ sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).

      ☐ sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.

   b. ☐ *(sent to the International Bureau only)* a total of (indicate type and number of electronic carrier(s))

      _____, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).

4. This report contains indications relating to the following items:

☒	Box No. I	Basis of the report
☐	Box No. II	Priority
☐	Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
☐	Box No. IV	Lack of unity of invention
☒	Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
☐	Box No. VI	Certain documents cited
☐	Box No. VII	Certain defects in the international application
☐	Box No. VIII	Certain observations on the international application

Date of submission of the demand	Date of completion of this report
Name and mailing address of the IPEA/EP	Authorized officer
Facsimile No.	Telephone No.

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.
PCT/EP2004/010491

Box No. I Basis of the report

1. With regard to the **language**, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ This report is based on translations from the original language into the following language _____, which is the language of a translation furnished for the purposes of:

☐ international search (Rule 12.3 and 23.1(b))

☐ publication of the international application (Rule 12.4)

☐ international preliminary examination (Rule 55.2 and/or 55.3)

2. With regard to the **elements** of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:

☐ the international application as originally filed/furnished

☒ the description:

pages 1-35 as originally filed/furnished

pages* _____ received by this Authority on _____

pages* _____ received by this Authority on _____

☒ the claims:

nos. _____ as originally filed/furnished

nos.* _____ as amended (together with any statement) under Article 19

nos.* 1-21 received by this Authority on 03.11.2005 with letter of 02.11.2005

nos.* _____ received by this Authority on _____

☐ the drawings:

sheets _____ as originally filed/furnished

sheets* _____ received by this Authority on _____

sheets* _____ received by this Authority on _____

☐ a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.

3. ☐ The amendments have resulted in the cancellation of:

☐ the description, pages _____

☐ the claims, nos. _____

☐ the drawings, sheets/figs _____

☐ the sequence listing *(specify)*: _____

☐ any table(s) related to sequence listing *(specify)*: _____

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

☐ the description, pages _____

☐ the claims, nos. _____

☐ the drawings, sheets/figs _____

☐ the sequence listing *(specify)*: _____

☐ any table(s) related to sequence listing *(specify)*: _____

* *If item 4 applies, some or all of those sheets may be marked "superseded."*

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.
PCT/EP2004/010491

Box No. V **Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

1. Statement

Novelty (N)	Claims	1-21	YES
	Claims		NO
Inventive step (IS)	Claims	1-21	YES
	Claims		NO
Industrial applicability (IA)	Claims	1-21	YES
	Claims		NO

2. Citations and explanations (Rule 70.7)

1 Reference is made to the following document:

D1: WO 96/28483 A (BASF AG; DANISCH PETER (DE); DIX JOHANNES PETER (DE); DENZINGER WALTE) 19 September 1996 (1996-09-19)

2 CLAIMS 1-5

Document **D1** discloses (see **dispersion 3** and **test A3, B3** in the table on page 15) aqueous dispersions of a copolymer which is obtained by radical copolymerisation of maleic acid anhydride with a decene oligomer followed by cross-linking with water. The oligomer has an average molecular weight of 340 g/mol and a water content of 76.2%.

2.1 The subject matter of claim 1 thus differs from the known aqueous dispersions in that an isobutene oligomer is used as monomer (B) and in that the copolymer is reacted with a compound Ia or Ib. The subject matter of claim 1 is thus novel (PCT Article 33(2)).

Box No. V — Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

The current invention can be considered to address the problem of developing aqueous dispersions which provide leather with improved water repellent finishing and fullness.

The solution to this problem as proposed in claim 1 of the present application involves an inventive step (PCT Article 33(3)) for the following reasons: D1 proposes (see **page 3, lines 1-10**) that the anhydride groups present in the copolymer may be solvolysised with hydroxy-functional compounds or with amines and that the monomer (B) may be an isobutene oligomer (see **page 4, lines 10-12**). Nevertheless, D1 does not suggest to a person skilled in the art the combination of monomers (B) and (D) as per the current claim 1, and does not indicate that such a combination leads to improved water repellent finishing and fullness.

2.2 Claims 2-5 are dependent on claim 1 and therefore likewise meet the PCT requirements for novelty and inventive step.

3 CLAIMS 6-15

Claims 6-15 are characterised by the subject matter of claim 1 and therefore likewise meet the PCT requirements for novelty and inventive step.

Box No. V — Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

4 CLAIMS 16 AND 17

Document **D1** discloses (see **dispersion 3** and **test A3, B3** in the table on page 15) copolymers which are obtained by radical copolymerisation of maleic acid anhydride with a decene oligomer followed by cross-linking with water.

4.1 The subject matter of claim 16 thus differs from the known copolymer in that an isobutene oligomer is used as monomer (B) and in that the copolymer is reacted with a compound Ia or Ib. The subject matter of claim 16 is thus novel (PCT Article 33(2)).

The current invention can be considered to address the problem of developing aqueous dispersions which provide leather with improved water repellent finishing and fullness.

The solution to this problem as proposed in claim 16 of the present application involves an inventive step (PCT Article 33(3)) for the following reasons: D1 proposes (see **page 3, lines 1-10**) that the anhydride groups present in the copolymer may be solvolysised with hydroxy-functional compounds or with amines and that the monomer (B) may be an isobutene oligomer (see **page 4, lines 10-12**). Nevertheless, D1 does not suggest to a person skilled in the art the combination of monomers (B) and (D) as per the current claim 1, and does not indicate that such a

combination leads to improved water repellent finishing and fullness.

4.2 Claim 17 is dependent on claim 16 and therefore likewise meets the PCT requirements for novelty and inventive step.

5 CLAIMS 18-21

Claims 18-21 are characterised by the subject matter of claims 1 and 16 and therefore likewise meet the PCT requirements for novelty and inventive step.